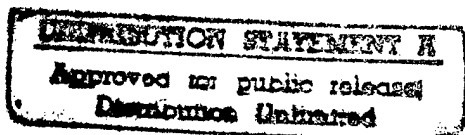


30 Mar 97

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Statement of

**The Under Secretary of Defense for Acquisition and Technology
Honorable Paul G. Kaminski**

**Before the
House Committee on National Security**

on

Defense Acquisition Reform

February 26, 1997

Mr. Chairman, Members of the Committee, and staff, thank you for the opportunity to appear before you today to discuss the Department of Defense's program of acquisition reform and how it supports the Department's overall modernization plans and the war fighter's needs. As I look at the defense acquisition system in detail, what I find is that the system is not broken-it fields equipment that is second to none in the world. The American people can take comfort in the fact that U.S. defense acquisition workforce is the very finest in the world. But the system can and must operate much more efficiently.

Reforming DoD's acquisition system is the principal reason why I agreed to serve as the Defense Acquisition Executive. Lasting acquisition reform requires commitment to a continuous process of improving a system which took over 50 years to build. The Department must continuously evaluate the way it does business in order to ensure that the war fighter has access to leading edge technology that is affordable and militarily effective. Our vision is to be the smartest, most efficient, most responsive buyer of best value goods and services to meet the war fighters' needs.

DoD has achieved a large measure of success with acquisition reform. The Department has made a number of critical and historical changes that are now being institutionalized and beginning to bear fruit. However, there are still many areas that require further work. This statement is a "report card" on where we have been in acquisition reform. It is also a strategic plan for where we are going in the future. The Department cannot, and will not, rest on its laurels. DoD is committed to sustaining the momentum built up during the last four years by continuing to institutionalize the reforms already begun.

Mr. Chairman, you may have heard of the Department's studies of a "Revolution in Military Affairs" or RMA. The revolution derives not from a single innovation or idea but from a

fundamental change in the way America fights. The revolution is driven by making full use of a wide range of new technology involving sensors, computers, low observables, precision guided munitions and telecommunications.

Today, I describe a vision of a second but related revolution -- a "Revolution in Military Acquisition Affairs" -- or RMA2. This second revolution has and is continuing to change the way America develops and fields weapon systems. Like the first revolution, this second revolution is driven by capturing the synergism derived from the integration of multiple thrusts. In particular, we are making progress on seven broad fronts: (1) re-engineering the acquisition support provided to war fighters; (2) continuous improvement of acquisition business processes; (3) reducing weapon system life cycle costs; (4) incentivizing a stable execution environment for acquisition programs; (5) implementing statutory and regulatory reforms; (6) conducting pilot demonstrations of promising acquisition reform initiatives; and (7) maintaining an experienced, highly trained, professional acquisition workforce.

SUPPORTING THE WAR FIGHTERS

Procurement reform is only a subset of the overall acquisition reform program underway in the Department of Defense. We need to ensure that those responsible for overseeing the procurement process do not forget that our main aim is to field systems, not to conduct endless reviews or to impede development by imposing unnecessary hurdles. My number one priority is to get systems fielded that will be useful to our combat forces and to do that as quickly and with as low a cost as we possibly can. And cycle time is a key measure of progress.

The Department of Defense can not afford a 15-year acquisition cycle time when the comparable commercial turnover is every 3-4 years. The issue is not only cost. The lives of our soldiers, sailors, marines and airmen will increasingly depend upon shortened acquisition cycle times as well. In a global market, everyone, including our potential adversaries, will gain increasing access to the same commercial technology base. The military advantage goes to the nation who has the best cycle time to capture technologies that are commercially available; incorporate them in weapon systems; and get them fielded first.

New national security challenges require DoD to design a more flexible, agile, and timely acquisition system capable of meeting unpredictable threats. This means that the DoD acquisition system must improve it's support to the war fighter by reducing the acquisition cycle time and leveraging the latest available technologies, particularly information technology.

Mr. Chairman, I am pleased to report that our acquisition system is responding well to this challenge. The Army's major initiative in this area is called Force XXI. In the Navy, it's called Smart Ship. The Air Force is standing up six new battle labs. And on a Department-wide basis, our Bosnia Command and Control Augmentation and Advanced Concept technology Demonstration initiatives are providing unprecedented support to the NATO Implementation/Stabilization Force (I/SFOR) in Bosnia and our operational forces deployed around the globe.

Army Force XXI

The U.S. Army is bringing together the tactics, training and technology to make dominant battlefield awareness a reality. Their objective is to digitize the battlefield and give everyone-division commanders, tank commanders and even dismounted infantry-the same, common picture of the battlespace. In the process, the Force XXI team is transforming today's field command post environment from one of grease pencils and acetate covered maps to one of computer displays and real time video surveillance feeds from unmanned aerial vehicles.

One of the major acquisition reform initiatives being implemented across the Department today is the concept of working in Integrated Product Teams--IPTs. By working together as an integrated product team, the Force XXI team, composed of war fighters from the 4th Infantry Division at Fort Hood, doctrine developers from the Army's Training and Doctrine Command at Fort Monroe, materiel developers from the acquisition command (Program Executive Officer for C3 Systems), technologists from the Army Labs, and their industry contractors have been able to reduce the cycle time it takes to make changes to our tactical automated systems from 2-5 years in the past to 2-6 months today.

Navy Smart Ship

The Navy Smart Ship project is aimed at leveraging information and communications technologies to reduce workload and manning on Navy ships. Through acquisition reform, the Smart Ship team was able to install 47 prototype equipment systems on the USS YORKTOWN-an AEGIS class guided missile cruiser-and did so in just 18 months. The YORKTOWN is deployed today and is operating and testing each of these systems-at greatly reduced workload and manning levels.

For example, on the bridge of the YORKTOWN, an Integrated Bridge/Voyage Management System has replaced older equipment and, together with adoption of complementary operational policy changes, has enabled the bridge watch to be reduced from 12 to 5 persons under wartime conditions. This equipment, along with similar equipment in the YORKTOWN's engineering spaces, was developed and installed in record time by a Government-Industry team working hand-in-hand with the ship's crew.

The real success of the Smart Ship project has been bringing the operator, the acquirer, and industry partners together in an effort to marry advanced technology with a suitable employment concept. An acquisition cycle time of perhaps four and a half years or more to introduce and test new equipment is just too long-it means the equipment is obsolete by the time it is installed on-board our combatant platforms. The Smart Ship team has reduced that cycle time to just 18 months through innovative partnering.

Air Force Battle Labs

The Air Force will stand up six battle labs in April to identify innovative ideas and measure how well those ideas contribute to the mission of the Air Force. The six battle labs will be small, focused and rely on field innovation to identify potential ways to advance the Air Force's newly defined core competencies of air and space superiority, global attack, precision engagement, information superiority, rapid global mobility and agile combat support.

Using a permanent cadre of 15-25 people, each battle lab will use video conferencing and unclassified and classified internet technologies. This will enable rapid use of dynamic techniques designed to identify promising concepts from across the active, Reserve and Guard force. The battle labs will differ from the Air Force's existing research laboratories in that the battle labs will focus on identifying innovative operational concepts that exploit mature technologies. The battle labs will draw on the expertise of Air Force research laboratories to rapidly generate any technical capabilities needed to demonstrate and measure the worth of promising operational concepts.

The sponsoring operating commands will present the results of battle lab initiatives to the Air Force Board of Directors. The Board will assess the worth of the demonstrated concept and identify actions necessary to integrate proven concepts into ongoing organize, train and equip programs. Successfully demonstrated concepts will then be introduced to the Commanders-in-Chief and their components through exercises, war gaming and other opportunities.

Bosnia Command and Control Augmentation

To support the NATO Implementation, now Stabilization, Force in Bosnia, I approved spending about \$80 million on an information-communications initiative to be sure we have superb command, control and communications systems for Operation JOINT ENDEAVOR. The impetus for this initiative came from a 1994 Defense Science Board summer study co-chaired by General Jim McCarthy. The DSB found that the intelligence available to our commanders in the field was limited to the 9.6 kilobit/second satellite communications modems then being used by our forces. At this rate, it was taking upwards of one-half hour to transmit a single photograph or image.

The Bosnia Command and Control Augmentation (BC2A) initiative improved our communications capabilities in two ways: first, by using commercial TV satellite technology to provide a direct broadcast communications capability; and secondly, by fielding a wide bandwidth, secure tactical internet connection through fiber and commercial satellite transponders. These communications allow military planners and logisticians, on the ground in Bosnia, in the European Command Headquarters in Germany and back in the Pentagon to have access to the same data at the same time-this access is available to virtually anyone with a 20 inch receive antenna, cryptologic equipment and authentication codes. We have designed the system in such a way that we are giving local commanders a 5000 mile remote control to select the programming that they receive over their 30 megabits-per-second downlinks from direct

broadcast satellites-that's about a 3,000-fold improvement in throughput capability.

Specific features of the BC2A initiative include providing live video from unmanned aerial vehicle video for a real time view of the terrain and operations distributed to ground stations throughout the theater. A satellite broadcast system provided information such as intelligence, logistics, weather, mapping, from national repositories to the theater overcoming a serious shortfall encountered in Operation Desert Storm/Shield. Another complementary satellite network synergistically advanced the US and coalition operational capabilities by making available many applications such as electronic mail, video conferencing, secure internet service, the Global Command and Control System, interactive data sharing and others in a field environment.

There are many striking aspects to this Bosnia Info-Comm initiative from an acquisition reform perspective. First, we pushed hard to get the most advanced information capabilities to our forces, and we succeeded. We accomplished in four months what it normally takes ten years to do for a new system. Second, we are demonstrating our willingness to use-even to lease-commercial systems. And third, we are proving the need to possess system engineering and system integration skills. This expertise is crucial to developing the multiple application layer architectures needed to tailor information systems for defense needs.

Advanced Concept Technology Demonstrations

Advanced Concept Technology Demonstrations (ACTDs) provide a framework by which we seek out emerging technologies to respond to our more critical military needs and incorporate those technologies into fieldable prototypes. These prototypes are then placed in the hands of our war fighters for evaluation. The fundamental question posed to the war fighter during the ACTD is "does this capability respond adequately to the need?" Where the answer is yes, we can field that capability years earlier than would otherwise be possible.

The use of fieldable prototypes to evaluate a proposed new military capability pays very large dividends in a number of ways. First it allows our military users to explore new tactics, concepts of operation and doctrine to fully exploit these new capabilities. Second, ACTD evaluations occur in their intended use and with their intended users rather than solely on a test range. This permits the user to judge the true contribution that the proposed system will make, recommend adjustments to improve performance and do so before an acquisition decision is made. In today's budget environment, we must chose carefully how we invest in modernization. With ACTDs, we give the war fighter an opportunity to use before we chose.

A third ACTD benefit is that operational demonstrations permit us to focus the technical specifications on the military mission and not "over engineer" them to stress system aspects which are not necessarily military significant. "Fieldable prototype" demonstrations permit us to more effectively define the operational requirements prior to entering into quantity procurement. A fourth benefit realized from the use of fieldable prototypes is the ability to leave the ACTD residual systems with the user to provide a limited operational capability.

Fifth, ACTDs foster a close teaming relationship between our military operators and the developers/technologists who are providing the new capability. This relationship results in a better understanding of the military needs and constraints by the developers/technologists and a better understanding of the potential capability by the operators. On a broader level, we see that organizations like the United States Atlantic Command in Norfolk, Virginia, are engaged in constant dialogue with the technical sponsors, such as DARPA, of each of those ACTDs.

Finally, ACTDs, under the sponsorship of a unified commander, can serve as a critical agent in fostering joint interoperability. A single ACTD will commonly draw technologies from multiple sources including service laboratories and defense agencies. In doing so they focus each of these organizations on the full scope of the military need, including interoperability.

I would like to highlight some of the significant operational results and progress we have achieved with a number of our ACTDs. Of the twenty-three ACTDs we have started in Fiscal Years 1995 and 1996, we have completed six. I expect we will complete three more during this calendar year. The most visible ACTD, and one of the first to be completed, was the Predator Medium Altitude Endurance UAV, which is deployed in support of Operation Joint Endeavor. Predator was completed as an ACTD in Fiscal Year 1996 and this April we expect to enter into production. Predator was a tremendous learning experience for us in understanding both the military value that results from rapid fielding of a critical new capability and in highlighting the challenges that we must meet in order to achieve our initial objective of more quickly developing and fielding new systems. We will continue to exploit the lessons learned on how to conduct military assessment and transition ACTDs to acquisition.

In October 1996, we concluded the Counter Multiple Launch Rocket ACTD, which dealt with the severe threat posed by the North Korean multiple launch rocket capability located just north of the Demilitarized Zone and within range of Seoul. This ACTD demonstrated and fielded significant improvements in capability related to rocket launch detection, command and control and counterfire, necessary to effectively deal with this threat. Times required to respond to multiple launch rocket attacks were reduced from 15-20 minutes to 3-4 minutes and the accuracy of the counterfire was increased dramatically. This ACTD was initiated as an all Army effort but, as it progressed, was expanded to include significant participation and contribution by both Navy and Air Force units. Major General Franks, the Commanding General of the 2nd Infantry Division in Korea said, "the way we need to put technology into the Army for the future is just the way we did it for this Counter MRL ACTD. The soldiers have had a chance to play with it and influence the outcome. . ."

General Joulwan, Commander-in-Chief, U.S. European Command (USEUCOM), as the operational sponsor, clearly articulated the purpose of the Counter Proliferation ACTD as being "to develop, integrate, demonstrate and transition to the war fighters a military ready capability to destroy WMD-related facilities." Initiated in Fiscal Year 1996, this ACTD is still in progress but has already demonstrated some significant results. In December 1996, a full "end to end" demonstration of the capability to accurately characterize, target and destroy a storage facility for weapons of mass destruction was successfully accomplished.

The Air Base/Port Biological Detection ACTD was also initiated in Fiscal Year 1996. Its objective is to provide significant enhancements in biological detection capabilities to military installations and responds directly to requests from several CINCs. This capability has already been fielded and site surveys are presently underway for expanded operational deployment later this year. The Commander of the Marine Corps Systems Command has requested procurement of additional systems to support the Marine Corps Chemical/Biological Incident Response Force.

I ask the Committee to give its full support to the Department's Advanced Concept Technology Demonstration initiative and to the President's budget request for ACTDs. It is an important part of our overall acquisition reform program and our plans to improve acquisition support to the war fighter. I invite you and members of your staff to review the results of completed or ongoing ACTDs, and later this year, to examine those additional ACTDs we will select for initiation in Fiscal Year 1998.

BUSINESS PROCESS IMPROVEMENT

Another important acquisition reform priority is continuous improvement of our acquisition business practices. The Department of Defense has made tremendous strides over the last four years in improving the efficiency of our acquisition system by adopting commercial buying practices and streamlining our business operations. However, DoD needs to continue to institutionalize the gains already made and to continue to improve the business processes. A sampling of some important initiatives taken in this area include: (1) Electronic Commerce/Electronic Data Interchange; (2) MILSPEC Reform; (3) Single Process Initiative; (4) Integrated Product Teams; (5) Earned Value Management; (6) Simulate, Test and Evaluation Process (STEP) Initiative; (7) Purchase Card; and (8) Prime Vendor Direct.

Electronic Commerce/Electronic Data Interchange

In October 1993, the President issued a memorandum entitled "Streamlining Procurement through Electronic Commerce." From July to September 1993, a DoD Process Action Team (PAT) developed an implementation plan to maximize the use of electronic commerce in contracting. The Deputy Secretary of Defense approved the 19 PAT recommendations on December 20, 1993. The report also formed the foundation for the federal government's process action team recommendation to implement Electronic Commerce in Contracting.

While we still have a great deal to do to fully implement electronic commerce, over 80,000 FACNET compliant transactions are occurring each month. In November-December 1996, the Defense Information Systems Agency began to implement a much more robust infrastructure that, when completed in December 1997, will provide 100 percent accountability, 99.5 percent throughput, and an average speed of service of 58 transactions per minute under a traffic load of 50,000 transactions per day. This objective capability will allow the addition of larger dollar value and more complex contracts to participate in the EC/EDI process.

Use of electronic commerce for procurement was broadened beyond the scope of the initial PAT recommendations to include: orders placed electronically against catalogs and indefinite delivery/indefinite quantity contracts, electronic payment, transactions compliant with FACNET requirements, and Web-based contracting actions. For example, in order to lower the cost to agencies placing notices in the Commerce Business Daily (CBD), as well as to allow for easier and more timely public access, we urged the Department of Commerce (DoC) to place the CBD on the World Wide Web (WWW). When DoC fully activated its WWW page in January of 1997, the price for notices dropped from \$18 to \$5 per notice with a promise of further reductions. We are also working with the Department of Labor to post wage determinations under the Davis-Bacon Act on the WWW in order to improve the process for soliciting and awarding construction contracts.

Improvements in DoD's infrastructure, as well as improvements in the use of various procurement methods will continue to be made within the Department. We are leading in a project known as Central Contractor Registration (CCR). The goal of CCR is to collect data that DoD and other agencies need on individual contractors once in an automated fashion. A draft policy has been issued that proposes to make registration in CCR a condition of doing business with DoD. CCR information will be obtained to satisfy Internal Revenue taxpayer identification number needs, DoD payment needs, including information to enable electronic funds transfer.

DoD must significantly extend electronic commerce/electronic data interchange (EC/EDI). Although we have been working on EC/EDI for some time, we have barely scratched the surface of the potential of this important technology. The paper-based processes which have served DoD well in the past cannot keep up with the speed of global commerce. Also, this technology allows DoD to show a single face to its customers which is important to our ability to move into the commercial marketplace.

Military Specification and Standards Reform

A key element of acquisition reform is changing the way DoD states its requirements in specifications and standards, and then applies those documents in solicitations and contracts. Detailed military-unique requirements can present barriers to DoD in accessing the commercial industrial base. The objective of military specification and standard reform is to break down those barriers in order to achieve three primary goals: save money; remove impediments to getting state-of-the-art technology into our weapon systems; and facilitate the diversification into commercial markets of firms that have traditionally produced goods primarily, if not solely, for Defense. To achieve these goals, DoD must establish a performance-based solicitation process, implement standardization document improvements, and create irreversible cultural change.

In 1994, the Secretary directed that performance specifications be used in all acquisitions unless approval was obtained to use a military specification or standard. This permits industry to offer DoD marketplace solutions that satisfy DoD's requirements. It also permits rapid access to technologies and reduces DoD's overheads via additional commercial business at traditionally defense companies. The following has been accomplished since military specification and standard reform efforts began in June 1994:

- 5104 military specifications and standards have been canceled;
- 555 performance specifications have replaced detail specifications;
- 1784 additional non-government standards have been adopted bringing the total to 7534;
- 522 commercial item descriptions have been developed bringing the total to 6070; and
- 519 data item descriptions have been canceled.

Single Process Initiative

In December 1995, Secretary Perry and I introduced the Single Process Initiative (SPI) as a means for DoD to start eliminating costly multiple processes within contractor facilities. At that time, most of our acquisition reforms affected only future contracts. We realized that to capture the full benefits of our reforms-we could not have an arrangement where new contracts required new processes to be established while at the same time, on-going contracts were executed using the old processes in the same facility.

And so we used our integrated product team model to set up a mechanism for making "block changes" to modify the specifications and standards for all existing contracts on a facility-wide basis, rather than on a contract by contract basis. Our goals were to consolidate or eliminate multiple management or manufacturing processes and rely on world class commercial processes as much as possible. Our end objectives were and still are: one, save money; two, obtain a better product; and three foster a more competitive industry.

The first block modification made under this initiative targeted the product assembly process at Texas Instruments Defense Systems and Electronics. Before the single process initiative, the assembly process was controlled by about 65 variations on 38 defense specifications; now, the process will be governed by eight specifications and standards. Moreover, all eight are performance-based, commonly-accepted commercial specifications and standards. That means that Texas Instruments can use the same processes to make commercial and government products, and in turn, they have the flexibility to allow their suppliers to consolidate the number of their processes.

We next signed what I call the "mother of all block change modifications" with Raytheon a little over six months ago. This single block change affects 16 separate Raytheon facilities and a total of 884 contracts in the areas of soldering procedures, engineering change approval, acceptance testing, configuration audits, annual test station certification, material review boards, cost data and performance reporting, calibration standardization, and component rescreening. The agreement is deceptively simple-the modification allows Raytheon to take advantage of industry-wide practices that meet the intent of military specifications and standards.

After fourteen months since the initiative started, 142 contractors have proposed 691 process changes as of February 7, 1997. Once we have accepted a proposal, it has taken us an average of around 110 days to adopt the modification, and to date, we have already modified about 290

processes. Resulting savings and cost avoidance to DoD programs on a recurring basis is \$40 million combined, \$6.5 million in savings and \$34 million in annual cost avoidance.

Integrated Product Teams

In his memorandum of May 10, 1995, Secretary of Defense Bill Perry directed that Integrated Product Teams (IPTs) would be used throughout DoD. IPTs bring together representatives from several disciplines at the very start of a project. This allows for early-on and continuous insight by all stakeholders in a program. It also encourages team members to work together in an atmosphere of trust and cooperation to make a program successful. The IPT approach reduces the probability of raising last minute, major issues that could delay a program by integrating timely input from all team members with varied functional backgrounds. Through IPTs we can do a better job in structuring programs to be successful, identify and resolve issues in a timely manner, and reduce the time it takes to go through the decision cycle. That means giving the war fighters what they need, when they need it, and at an affordable cost.

There are three types of IPTs. The first is the Overarching IPT (OIPT). The OIPT provides top-level strategic guidance, functional area leadership, and a forum for issue resolution. Generally, there can be several Working Level IPTs (WIPTs). The number and type of WIPTs are determined by the requirements of each individual program. What ever their nature, the WIPTs serve as a major advisory body to the Program Manager. The third type is the Program-level IPT (PIPT). The PIPT is formed between the program office staff and the contractor. Again, the PIPT serves as an advisory body to the Program Manager.

The use of IPTs within DoD has been recognized as reducing the management decision cycle time and improving the structuring of successful programs. One indicator of IPT success has been the number of Major Defense Acquisition Programs (MDAPs) that have been authorized to proceed into the next acquisition phase without convening a formal Defense Acquisition Board (DAB) review. In 1995 and 1996 of 41 scheduled DABs, 29 were canceled and the Acquisition Decision Memorandum (ADM) was issued by the Milestone Decision Authority (MDA) based upon the recommendations of the OIPT and DAB Readiness Meeting (DRM)-all issues had been satisfactorily resolved through the IPT process and the program was ready to proceed. The cycle time for ADMs which averaged 23 days in 1994, went down to a little over two days in 1995 and stayed at this level in 1996.

Earned Value Management Initiative

The Department of Defense has accepted industry guidelines for earned value management systems (EVMS) as replacements for the Cost/Schedule Control Systems Criteria (C/SCSC). The DoD had required its contractors to comply with C/SCSC for nearly thirty years. In recent years, the principles embodied in C/SCSC were adopted increasingly by commercial industry in the United States and by government and industry in Australia, Canada, Sweden, and the United Kingdom.

The EVMS guidelines were issued by the Aerospace Industries Association, the American Shipbuilders Association, the Electronic Industries Association, the National Security Industrial Association, and the Shipbuilders Council of America. By asserting ownership of those principles, industry made it possible for DoD to reduce significantly both the detailed reviews that were previously required on every major new contract and the amount of documentation required for work performed on Defense contracts. In accepting the industry guidelines as a substitute for C/SCSC, DoD encouraged industry to develop a widely accepted industry or international standard that would obviate the need for DoD to maintain its own requirements. Accordingly, the industry associations will reissue the guidelines as an American National Standards Institute (ANSI) standard in 1997. In the future, DoD will be able to rely on our contractors to maintain management control systems that protect the public interest.

New Defense contracts will cite the EVMS guidelines. Contractors that are operating management control systems previously accepted as compliant with C/SCSC are being encouraged to submit changes through the single process initiative procedures to change all existing contracts within their facilities to a single EVMS business process.

The change from C/SCSC to EVMS marks a major shift in responsibility from government to industry and supports the "insight, not oversight" philosophy underlying DoD acquisition reform initiatives. The shift in responsibility will benefit industry by permitting more efficient, single internal processes that meet all program management needs, and will benefit the government by improving contract administration while at the same time reducing oversight, with savings for the taxpayer.

Simulation, Test and Evaluation Process Improvements

The Department of Defense is pursuing five themes to reform and improve the simulation, test and evaluation process (STEP) and better support streamlined acquisition.

The first theme is early tester involvement, especially the operational tester, in the development of a system to identify potential problems early so that they can be addressed as the system is being designed. On two ship programs, the LPD-17 and New Attack Submarine, early operational assessments identified a number of potential problems that led to design changes, additional system development work, and in some cases, a reexamination of system requirements. On the F/A-18 E/F, a switch problem was identified in time for incorporation into production systems. The early tester involvement on these and other programs has led to avoidance of costs associated with later correction of these problems.

The second theme involves combining development test (DT) and operational test (OT) activities to enable more efficient use of test resources. In the case of the Joint Standoff Weapon (JSOW), combining DT and OT flight tests allowed a reduction of the originally planned eighteen OT launches to fourteen with the saved missiles being used to gain early deployment experience. In

planning for the AIM-9X, testers eliminated ten missile firings and potentially saved 70 million dollars through combined DT/OT and combining AIM-9X testing with other weapons systems testing.

The third theme deals with combining testing with training or field operations to reduce the cost of testing as well as improved its realism. The Joint STARS OT program was modified due to its deployment to Bosnia. The operational testers participated in the deployment and gathered sufficient information to address many of the test issues and support a production decision. The MIA2 tank follow-on test to verify correction of deficiencies was carried out completely in a training environment. Since the test objectives focused on tank reliability, the unit commander was completely unhampered in structuring the operations to meet his training objectives.

Theme four is concerned with expanding the use of modeling and simulation (M&S)-beyond using specially constructed M&S tools for resolution of test issues-to using the same M&S tools used in system design for test issue resolution. The AEGIS test facility at Moorestown, NJ, is primarily a development facility, but it was recently used to test an upgrade to the AEGIS SPY-ID radar in support of a production decision. In addition to using the test facility, real targets and electronic countermeasures, simulation was used for a variety of additional targets, including those with low radar cross-section, low elevation propagation paths, and the clutter expected from a moderate sea state. These tests identified several problems, demonstrating the utility of these simulations. M&S is helping to evaluate the strategic sealift ships and enabled reducing the number of loading and unloading tests from four to two. M&S will examine the load and unload times for the other two ship variants as well as some of the many possible load configurations. M&S plays a major role in most testing by supporting test planning to optimize use of test resources.

And the fifth theme is encouraging greater participation in the ACTD process by test personnel and organizations-from assisting in ACTD planning and evaluation to supporting the transition of ACTDs to acquisition programs at the program initiation milestone. The Predator unmanned aerial vehicle (UAV) ACTD included participation by the Defense Evaluation Support Agency and the Air Force operational testers. Their participation helped to identify system problems and will support entry into acquisition at a production point saving considerable time in a development process.

Purchase Card

DoD established a process action team to look at ways the government purchase card can be promoted within the Department for micro-purchases, interdepartmental transfers, and as a payment vehicle for purchases over \$2,500. Data collected for the first half of FY 1996 list nearly 1.2 million purchase card transactions. This accounts for approximately 51 percent of simplified acquisitions at or below \$2,500. From performance in previous fiscal years, it is estimated that the Department will have 3.23 million purchase card transactions valued at \$1.36 billion in FY 1996. This estimates nearly doubles the totals for the previous fiscal year.

Prime Vendor Direct

The Defense Logistics Agency's (DLA) Prime Vendor contracts are closed loop EDI trading partnerships with a commercial distributor of market ready or commercial products using EDI from pricing and distribution arrangements or corporate/long term contracts negotiated by the Government or from vendor provided subcontracts. DLA's use of best value buying practices, aided by the acquisition reform environment's emphasis on use of commercial buying practices, for FY 1996 was approximately 88 percent of total obligations for clothing and textiles, 74 percent of total obligations for medical, and 58 percent for subsistence items.

DLA has awarded its first prime vendor contract for maintenance, repair and operation items for military installations in the Southeastern Region. This contract represents the initial venture into establishing a prime vendor relationship with a firm to provide facilities maintenance supplies to include plumbing, heating and air conditioning, refrigeration, electrical, lumbar, small tools, paint hardware, and assorted fixtures. All items to be supplied are commercial items; over 8,000 items are available to our customers.

REDUCING LIFE CYCLE COSTS

A major focus of our acquisition reform program is to reduce the life cycle cost of our new and existing systems. On new systems, it means paying attention to life cycle costs early in the design of a new system. The message here is that "back end" sustainment costs are receiving more "up front" design attention. Each technology effort must "buy it's way onto our programs" in terms of reducing life cycle cost and program risk. To support these investment decisions, we are encouraging the use of fairly well developed life cycle cost models that includes estimates for operational and support elements like unit level consumables, training, expendables, depot maintenance and mission personnel.

However, given the speed with which we are introducing new systems to replace those already in the field, we simply cannot wait on the new weapon system development process to solve our growing problem with the increasing costs to operate and support our existing systems in the inventory today. Our reforms include creating the proper incentives to insert new low cost technologies in our legacy systems to improve their reliability, maintainability, and sustainability. In some cases, we are leveraging commercial dual use technologies for insertion into existing systems. And our reforms include substituting fast transportation and real time information for layered inventory as a strategy for improving logistics response times.

Cost as an Independent Variable

In the past, meeting the threat dictated an emphasis on performance, creating a culture in which cost and schedule were thought of as dependent variables in the acquisition process-performance levels were specified and the cost and schedule were adjusted to achieve that outcome. For years the non-defense sector has successfully developed and produced high-quality products that fully meet or exceed customer needs, while also meeting specific, predetermined cost targets for these products. The thrust of "cost as an independent-variable" (CAIV) adapts these successful

practices to meet DoD needs.

The CAIV process recognizes that needed military capabilities are, in most cases, best expressed as end results, which actually are the aggregate combination of numerous, more detailed, parameters. With rare exception, there are multiple sets of detailed specifications that can be combined to attain the desired end result, so that any one item can be varied significantly so long as compensating adjustments are made elsewhere in the system.

Significant savings are possible. For new programs using CAIV from the onset, savings on the order of 30-50% can be obtained. For existing programs in later acquisition stages, retrofitting CAIV concepts is expected to produce savings on the order of 10-20%. The CAIV acquisition reform initiative has been successfully implemented on many DoD programs. Three programs highlight the benefits of this initiative: the Joint Strike Fighter, the Space-Based Infra-Red System and the Joint Air-to-Surface Standoff Missile.

Joint Strike Fighter (JSF)

CAIV was implemented on the Joint Strike Fighter program by constructing in-depth requirements/cost/performance trade models (down to subsystems and major components) to set requirements and cost goals/targets at the same time. Only a few KPPs were defined and the "users" were involved in the tradeoff studies. An aggressive unit cost target was defined "as less than the cost of a current low-cost fighter." These unit cost targets were included in the ORD and early RFPs. Production cost estimates will evolve based on commonality demos and manufacturing process demos to validate process maturity. The program funding was "front-loaded" to provide funding for the demos, other cost reduction tradeoffs, and technology efforts.

Spaced Based Infra-Red System (SBIRS)

A user-led IPT identified the major cost drivers, considering and evaluating user utility. Cost target was in ORD and Concept Validation RFP. The User and industry were involved in requirements/cost/performance trades studies to develop a set of affordable/ achievable key requirements and thus set the KPPs. For EMD, aggressive cost targets were part of source selection. Contractor trades (with Government access) will be conducted to minimize LCC. An innovative incentive fee splits cost savings per unit between the contractor and the Government. Approval cycles have been reduced, and the EMD RFP was reduced from the

expected 1000+ pages to 60 pages. Contractors will participate in IPTs for management, cost, and contracts.

Joint Air-to-Surface Standoff Missile (JASSM)

Concept development phase studies, AF/Navy user input, and acquisition inputs formed the basis for early cost targets. A "Contractor Day" was held to get industry input. All of this was used to set both development cost and unit cost targets. The unit cost target contained both objective and threshold unit cost values that are less than 50% of historical predictions. The cost targets are in the ORD and RFPs. The RFP contains a performance based statement of work. Competition will be retained to EMD. A "bumper-to-bumper" warranty is included in the unit cost target to cover LCC. A procurement cost commitment curve is being used for early units with incentives for costs lower than the curve. The Government will have on-line access to the contractor system for cost tracking. There are no Mil-Specs, a minimum of CDRLs, a performance-based SOW, and past performance is 50% of source selection.

Dual Use Applications Program

The Department must take advantage of the opportunity to apply commercial technology and products to enhance our military capability and lower the life cycle costs of our weapon systems. The growing trend of commercial investment in R&D now easily surpasses that of the DoD, by a margin of two to one. This large commercial investment in R&D means that the commercial sector has clearly been established as the driving force behind technological innovation in the US today. The Department's program of acquisition reform must leverage this technological innovation for the benefit of military capability.

The Dual Use Application Program's (DUAP) Commercial Operations and Support Savings Initiative, or COSSI, will combine life cycle cost containment with leveraging commercial technologies. It will take our dual use efforts in a new and exciting direction -- COSSI will support the retrofit of fielded military systems with commercial technologies to decrease the cost of operations and support of these systems.

What's new here is that we are using commercial technologies, not only for newly developed systems, but for fielded systems. And although we may realize benefits in increased performance, or decreased development or acquisition costs, our real focus is on life cycle costs. These are major differences from the past.

In COSSI, the Acquisition Executives of the Army, Navy and Air Force have the lead. The Service acquisition communities will help choose the commercial products and processes that make sense for their fielded military systems. They must work closely with commercial industry and the weapons system prime contractors to engineer and adapt the commercial product for the specific weapon system, and test the product to insure that it achieves at least comparable performance at a decreased operations and support cost. In fact, we will require that industry include a statement of support from the Military Service customer as a formal part of their team proposal. This is the culmination of DoD's trend toward partnership with industry for mutual benefit, which is key to so many of our acquisition reform efforts.

Perhaps the most exciting aspect of COSSI is that it will prototype an innovative acquisition approach for weapon system upgrades. For the development and testing of what we are calling the modification kits, the Services will use Section 845 prototyping agreements which are not constrained by the sometimes inflexible government policies and standards found in our cumbersome procurement system. These agreements allow prime contractors to apply Independent Research and Development funds to cost share, and to use commercial practices that attract commercial partners to the development team.

These Section 845 agreements have been used for the past three years by the Defense Advanced Research Projects Agency in an experimental mode. The government and industry, as a team, negotiate sensible terms for intellectual property rights, accounting and auditing practices and sharing of costs.

COSSI will validate a new, commercial-like approach for prototyping and procuring upgrade kits -- an approach that can be used on an expanded basis in years to come. And with the DUAP Science and Technology Initiative, we will continue to have access to state-of-the-art commercial technology for our developing weapons systems. DUAP's two-pronged strategy of commercial upgrades and dual use research and development will help the Department take greater advantage of commercial industry's research, technology, products, and processes at every stage of the acquisition life cycle.

STABLE EXECUTION ENVIRONMENT

Although we have made remarkable progress during the past several years in reforming much of the acquisition process, the most significant work not yet accomplished is tackling the problem of instability in our acquisition programs and the attendant cost growth and schedule slips caused by instability. I view this as the single most important acquisition reform issue to be addressed in the near future, and I intend this to be a cornerstone of the Department's continuation of the reform process.

Virtually every major study of the Major Defense Acquisition Program process in recent years has cited instability as a major contributor to cost growth in DoD systems. In fact, detailed studies by RAND have shown that major acquisition programs experience an average of 20% cost growth from our Milestone II estimates. Approximately half of that growth is attributable to funding instability. These changing funding profiles result from a variety of factors and competing Departmental priorities including unplanned contingency operations, underestimation of requirements for Operations and Support (O&S), shifts in priorities within the Department for systems in response to changes in the anticipated threat and technical difficulties.

The Department's emphasis on Readiness and personnel Quality of Life initiatives coupled with the dramatic decline in the DoD top-line has left little latitude in reacting to unplanned operational expenditures without decrementing the Procurement and R&D accounts. As a consequence large numbers of major acquisition programs have been forced to serve as "bill payers" forcing reductions in production rates, delays in fielding new systems, and lengthy program stretches across all the programs in development and production within the Department. Program stretchout is deleterious for two reasons: (1) it increases overall program cost by deviating from carefully planned baselines designed to ensure we develop and produce weapon systems in an efficient manner, and (2) it ties up resources in the out-years that could have been used for other projects. These funding instabilities are a major cause of long-term growth in weapon system costs.

The Department is currently investigating a range of mechanisms intended to reduce the instability in our major acquisition programs. While we have not completed implementation plans and much detailed work remains, we believe that at least three basic mechanisms are key components of the solution: (1) a fiscal guidance restraint; (2) full funding of contingency operations; and (3) budgeting for risk in individual programs.

Fiscal Guidance Restraint

Current long-range budget formulation practice is to allocate 100% of anticipated resources to anticipated requirements. This assumes we are able to predict our requirements and budgets with absolute certainty as much as six years into the future. However, this practice "locks in" too many things and does not recognize the need to be flexible and responsive to changes in National and Departmental priorities, changes in the global environment we operate in, technological change, or additional funding requirements for investment programs. We have also realized that there is a consistent pattern of resources planned for investments in the outyears eventually shifting from long term investment programs to near-term Operations and Maintenance (O&M) needs. To mitigate the migration out of investment programs and the induced instability and cost growth associated with this, we are investigating a mechanism with the basic intent of restraining the expectations in out-year budgeting for modernization and creating a prudent "programming reserve" to permit more flexibility in addressing emergent requirements and counter the tendency to use the investment accounts as bill payers for O&M needs. This type of mechanism is commonplace in commercial business practices.

Contingency Funding

Over the five year period from 1992 to 1996, an average total of \$2.5 billion per year was required to support contingency operations such as Haiti, Somalia and Bosnia. Since these operations were unplanned, no resources were specifically budgeted to support them. In some cases supplemental appropriations augmented DoD's budget to help fund things like contingencies, but generally speaking the Department was forced to pay the bulk of these bills by reprogramming funds from investment programs which is very destabilizing to programs during the year of execution. The Department has recently begun taking action to prevent unbudgeted costs of non-routine operations, like those in BOSNIA, from absorbing funds needed for modernization and other top priorities. To that end, the FY 1998 budget continues for the second year the practice of budgeting for known military operations. The request includes \$1.5 billion in FY98 in the Overseas Contingency Operations Transfer Account to complete planned operations in Bosnia. In addition, \$ 700 million is included in the Military Service/Defense Agency budgets for continuing operations in Southwest Asia.

Budgeting for Risk in Individual Programs

The first step in managing risk in programs is to accept the fact that major uncertainties and risks are associated with any major developmental program. With that basic premise in mind, it is simply "good business" to plan and provide sufficient reserves to accommodate these factors if the need arises. It is our intent to move to a policy of building budgets for programs that incorporate reasonable and prudent reserves and flexible management controls to address potential funding shortfalls related to the inherently risky nature of complex technologically advanced development and production projects. The specific mechanisms of how this will be accomplished are being studied, but the intent is to provide managers a sufficient amount of "insurance" against technical risks and uncertainty so that when these things materialize we can address the problems without negatively impacting other programs. Examples of the kinds of things these funds may help offset could be labor rate changes, unexpected manufacturing problems, or technical difficulties which

could not have been foreseen. These funds would not be used for buying more units or upgrading capabilities/performance. A culture change within the Department and elsewhere will be necessary to ensure these funds are not viewed as "padded" estimates or funds available to pay for a host of other "taxes".

STATUTORY AND REGULATORY REFORMS

The Department of Defense has long recognized the need to find ways to streamline and reduce the administrative costs of its acquisition system while ensuring the integrity of the system.

For many years DoD suggested to Congress that government unique contracting requirements, imposed by law, restrained DoD's ability to streamline the acquisition system and processes. Congress responded by passing Section 800 of the National Defense Authorization Act of 1990, that required DoD to organize a panel of representatives from government, industry, and academia to make recommendations for modification of the laws impacting DoD acquisition. The Section 800 panel identified over 600 statutes that applied to DoD acquisition and recommended almost 300 laws for repeal or change. DoD submitted the panel's report to Congress in January 1993. In 1993, the Vice President also reviewed the way the government operates and made recommendations for improvement in the National Performance Review (NPR).

Based on the recommendations of the panel and the NPR, DoD developed a vision for reforming DoD's acquisition system. The vision was shared with Congress in February 1994 and was entitled, "Acquisition Reform -- Mandate for Change." In that document, the Secretary of Defense acknowledged that:

- new national security challenges require DoD to design a more flexible, agile, and timely acquisition system capable of meeting unpredictable threats;
- declining budgets require DoD to become more efficient and effective, as well as to reduce the costs of DoD's products and services; and
- technology is developing at an even faster pace, is more often than not led by the commercial sector, and is available world-wide so that to maintain technological superiority, DoD must have access to the latest state-of-the-art commercial technology.

The Secretary went on to say that DoD, as an enterprise, must respond to these changes by moving from its rule-based system of laws and regulations to a system in which, based on guiding principles, professionals in the acquisition workforce exercise their judgment in making sound business decisions on behalf of the U.S. Government. The vision in the "Mandate for Change" is to reengineer the entire acquisition system. In execution of this vision, the Office of the Deputy Under Secretary of Defense for Acquisition Reform was created to champion fundamental reengineering and continuous process improvement. Also, DoD formed process action teams to identify problems, recommend solutions, and develop implementation plans.

Many of the recommendations made by the NPR and the Section 800 panel were codified in the

Federal Acquisition Streamlining Act of 1994 (FASA). The Act established a Simplified Acquisition Threshold (SAT) of \$100,000; authorized the use of simplified acquisition procedures up to \$50,000 (or up to the SAT once a certified FACNET system is in place); and created a micro-purchase authority up to \$2,500. These provisions allow DoD to reduce the administrative cost of doing business for almost 99% of DoD contracting actions. The micro-purchase authority allows DoD to expand the use and of the government purchase card, providing direct access to the commercial vendor base to satisfy immediate, low cost, low risk needs. The Act also established new definitions of commercial and non-developmental items, authorizing exemptions from government-unique terms and conditions for the procurement of these items. These provisions facilitate access to commercial technologies that might not have been available to DoD. The Act authorized five Defense Acquisition Pilot Programs to permit streamlining changes to be incorporated into them. The Act provided relief from the requirement for contractors to provide cost or pricing data for a broader range of procurements.

The Clinger-Cohen Act of 1996 (formerly known as the Federal Acquisition Reform Act of 1996 (FARA) and the Information Technology Management Reform Act of 1996 (ITMRA)) further advance the changes made by FASA. The Clinger-Cohen Act provides a number of significant opportunities for DoD to further streamline and reduce non-value added steps in the acquisition process. Among the most significant changes authorized by the Act is a test of the use of the Simplified Acquisition Procedures (SAP) for commercial items between the simplified acquisition threshold of \$100,000 and \$5 million. This should allow DoD to reduce its administrative costs, and the overhead costs for DoD's vendor base, for purchases of relatively low risk items. This change eliminated government-unique requirements previously cited by industry as a barrier to doing business with DoD. The Act also provides the authority for contracting activities to use SAPs for all requirements between \$50,000 and the SAT while the government works to fully implement Electronic Commerce/Electronic Data Interchange (EC/EDI).

The Clinger-Cohen Act also provides substantial relief from cumbersome processes that add little value, but significant cost, to the acquisition of information technologies. The passage of the Act allows DoD to focus on the appropriate use and management of information technology resources. It should also reduce the amount of time an information technology acquisition takes by reducing the number and frequency of protests, while moving the Department in the direction of the use of sound acquisition strategies.

Congress has provided significant relief from burdensome acquisition statutes and regulations. DoD has taken advantage of the relief provided in fashioning implementing regulations. Further, DoD has extended that relief by revising its internal policy documents in the spirit of the legislation.

Implementation of Information Technology Management Reform Act (ITMRA)

Notwithstanding ongoing activities and the existence of a sound framework, the Department recognizes that much work remains to be done to fully achieve ITMRA objectives. While some of this work will necessarily need to focus on refining and expanding specific initiatives, the more difficult task is one of modifying existing IT processes, policies and procedures (e.g., strategic planning, programming, acquisition oversight, and process improvement) into an integrated process for making prudent IT investment decisions. An equally complex challenge for the

Department is to foster, via specific initiatives, cultural changes brought on by ITMRA and associated legislation.

Specifically, the Department is taking action to strengthen, expand, and institute DoD strategic planning for IT investment, and effectively integrate these plans and associated processes into the existing planning, programming and budget processes.

We are direct management attention to information technology's contribution to mission performance, rather than the process used to procure IT. The Department's recent focus on building successful programs needs to be further expanded to be even more results-oriented.

We are developing a consensus and finalizing a DoD performance measurement strategy and guidelines that strengthen the linkages between DoD strategic mission-related planning goals, and IT planning and investment decisions. In addition, we are re-assessing financial systems and budget exhibits which capture DoD IT resources information, and determine how these can best be used and, if necessary, modified to support IT investment and development decisions. And we are promoting the use of education, training, and other forums to increase understanding of the ITMRA requirements, and ensure the law's requirements are addressed in existing training curricula as appropriate.

Federal Acquisition Regulation Rewrite

There are several initiatives currently in process to revamp and streamline the FAR. Part 15, Contracting by Negotiation, is being rewritten to improve the efficiency of the acquisition process while providing the best value to the taxpayer. The revisions contemplate more communication between Government and industry, and will encourage such practices as oral presentations to supplement streamlined written proposals and restricting the size of the competitive range for reasons of efficiency.

Part 25, Foreign Contracting, draft revisions make the regulation more user friendly, provide clarifications and examples, and eliminate redundancies. The Cost Principles in Part 31 are being streamlined to reduce administrative and accounting burdens on contractors, to clarify the allowability of certain costs, and to promote our policy of stimulating the export of U.S. products. Specific improvements underway include clarifying the allowability of payments to workers who are being involuntarily terminated and who agree to waive their rights to file employment-related claims, and eliminating: (1) the unique cost principle for Automatic Data Processing Equipment leasing; (2) the ceiling for IR&D/B&P Costs for FY96 and beyond; (3) the allowability restriction for foreign selling costs; and (4) the prohibition on calculating foreign differential pay based directly on an employee's specific increase in income taxes resulting from assignment overseas.

Part 45, Government Property, is being reconfigured, with substantial industry participation, to eliminate administrative burdens, simplify the text and clauses, eliminate recordkeeping requirements, and place constraints on the government's right to take title to certain property. The draft revisions propose accelerating the property disposal process, reducing the volume of government property currently required to be tracked and inventoried by the contractor, and

simplifying the government's property rental procedures.

We have instituted electronic contracting methods to streamline the process of contracting for supplies and services, and to reduce burdens on both industry and government.

Part 37, Service Contracting, is being overhauled to change the focus in acquiring services. Henceforth we will emphasize the use of performance-based contracting methods to ensure that the appropriate performance quality levels are achieved and that payment is made only for services which meet contract standards.

We have eliminated certification requirements for contractors and offerors unless specifically imposed by statute or approved for retention by the Administrator of OFPP. In addition, we are currently reviewing all of the existing FAR representations (about 20) to see how many impose an unnecessary administrative burden on contractors. Wherever we can protect the government's interests by using a less burdensome means of obtaining necessary information, we will do so.

DoD Directive 5000.1/DoD 5000.2-R Rewrite

The new policy and procedures resulting from DoD's initiative to rewrite the DoD 5000 Series represent dramatic change in almost every major aspect of the way DoD traditionally does business. The new documents fully implement FASA, as well as the recommendations of the 1995 Commission on Roles and Missions; and consolidate and integrate acquisition policy and procedures for both weapon systems and automated information systems allowing DoD to cancel several Acquisition Information System policy documents

Directly affecting departmental policy, the rewritten 5000 Series articulate a few guiding principles for all acquisitions across the Department and set forth procedures for major programs. Tailored management approaches are recognized as a key element in successful program execution, and Integrated Product Teams are institutionalized as a means of bringing representatives of all functional disciplines together as a team to build successful programs, identify and resolve issues, and make sound and timely recommendations to facilitate decisionmaking.

Directly, as well as through these changes, the new policy encourages acquisition professionals to innovate through a variety of practices and techniques, including such nontraditional approaches as Advanced Concept Technology Demonstrations and rapid prototyping.

The new 5000 series are dramatically reduced in size-the previous version was over 1,000 pages and the new version is only 160 pages-and they mandate standard formats for only a handful of reports and cancel a 300-page plus manual that established mandatory formats for numerous acquisition reports and fostered a one-size-fits-all approach.

Defense Acquisition Deskbook

The Defense Acquisition Deskbook is an automated reference tool that provides acquisition information for all functional disciplines and for all Services and DoD Agencies. It is designed to provide easy access to the most current acquisition information. Since release of the operational test version in May of 1996, the Deskbook has grown from 30 to 130 megabytes of information, from a CD distribution of 1,000 to orders for 17,000 (includes Deskbook CDs provided to government personnel and those sold through the Government Printing Office), and boasts a user community of approximately 500,000 across OSD, the Services and Agencies, and Industry.

The Deskbook provides value in four ways. First, it provides a powerful impetus to reviewing regulatory guidance to determine what is mandatory and what is discretionary by providing a place for the identification of alternative practices and for capturing lessons learned. Thus, an empowered workforce can use its judgment on how to meet the objectives established in the guiding principles. Providing an information source that separates mandatory information from discretionary information leads to a streamlined regulatory regime.

Second, it ties together the acquisition community at all levels. The Deskbook includes guiding principles covering all acquisition disciplines and alternative practices used by all components, at all levels, and from all disciplines. Further, the Deskbook displays this information to every user in the Department. The expected result is a reduction in duplicative policies and an increase in the use of practices that reduce acquisition time and cost.

Third, it provides a direct, timely, and unfiltered link between DoD leaders and the front-line practitioner. In the regulatory based system where regulatory guidance was passed from the top to the bottom, each layer added interpretation and additional guidance. Thus, the practitioner did not know the real intent, the possible variations inherent in implementation, and the limitations on the guidance as it was initially promulgated. Allowing the practitioner to see the guidance as it was originally written, and allowing the practitioner to ask questions or provide comments through the Deskbook's bulletin board ensures that the intent of the policy initiator is received by the policy implementer. Just as important, the policy implementer can inform the policy initiator of any unintended consequences.

Finally, the Deskbook is more than just a source of information that can be accessed quickly. It is a key to the most important part of acquisition reform - cultural change. One of the barriers to changing acquisition process is the difficulty in getting the message out as it is intended. By being an impetus for a reexamination of the current regulations, by allowing insight across the acquisition community, and by providing direct, unfiltered information to the entire workforce at the same time, the Deskbook fosters cultural change. It does this by giving each member of the acquisition workforce the knowledge to do his or her job better and the freedom to ask questions and challenge assumptions.

Other Transactions

The Defense Advanced Research Projects Agency was given authority in Section 845 of the FY 1994 National Defense Authorization Act to use "Other Transactions" (instead of commonly used contracts) for prototype projects that are directly related to weapon systems. "Other Transactions" are more flexible than contracts since many statutes do not apply. The section 845 prototype authority was made available for Department-wide use on a trial basis in the FY 1997 Authorization Act. DoD has issued guidance to the Department that should facilitate the use of this flexible authority.

Restructuring Cost Savings from Mergers and Acquisitions

DoD has devoted careful attention to mergers and acquisitions in the defense industry, with a focus on developing policies to address DoD needs and encourage the timely and cost effective downsizing of the industry. The Defense Contract Management Command, the Defense Contract Audit Agency, the General Counsel, and USD(A&T) staff have worked as a team to address the relevant issues and ensure we have reasonable policies that protect the government's interests and ultimately save money for the Department. DoD believes a good way to do that is to permit contractors to include both the costs and the savings of becoming more efficient producers in the prices they charge, but only when we can certify that the savings are at least twice as large as the costs. Over the past three years, we have agreed to let contractors include \$720 million in restructuring costs in our contract prices, and we expect to realize \$3.95 billion in savings as a result.

Memoranda of Understanding (MOUs) on Reciprocal Defense Procurement

The U.S. has signed Reciprocal Procurement MOUs with NATO and several other allied countries to foster a two-way street in defense trade. These MOUs enhance standardization, rationalization, and interoperability of defense equipment, but they also give us access to foreign suppliers and enable us to obtain the best quality in defense equipment. Statutes and regulations that limit our sources of supply to United States firms are inconsistent with these MOUs. In that spirit, we recently revised the Defense Federal Acquisition Regulation Supplement to remove a number of restrictions to domestic sources not required by law.

PILOT PROGRAMS

The Fiscal Year 1995 Defense Authorization Act authorized the Secretary of Defense to designate five programs to participate in the Defense Acquisition Pilot Program. The five programs are: Joint Direct Attack Munition (JDAM); Fire Support Combined Arms Tactical Trainer (FSCATT); Joint Primary Aircraft Training System (JPATS); Commercial Derivative Engine (CDE); and Commercial Derivative Aircraft (CDA). The pilot programs were afforded statutory relief under provisions of FASA.

In addition, I designated certain medical, subsistence, and clothing items of the Defense Personnel Support Center and the C-130J program as regulatory relief-only pilot programs. All seven of the pilot programs were granted regulatory relief. The pilot programs are realizing substantial progress in demonstrating that, through the use of commercial products and commercial practices, military items can be acquired with improved development and delivery schedules, at reduced cost; and with substantial gains in in-house efficiencies.

Joint Direct Attack Munition (JDAM)

The JDAM is a joint Air Force/Navy program to develop an affordable, accurate, all weather kit for current inventory 1,000 and 2,000 pound bombs. The JDAM employed commercial practices, regulatory/statutory relief, innovative contracting processes, streamlined oversight, a commercial like warranty, integrated product teams, and contractor formats for data submittals, and earned value reporting. The CAIG estimate showed a average 50% reduction in average unit procurement cost. The total estimate was reduced by \$2.0 billion in FY 1995 dollars. JDAM program office staffing was reduced by 30%.

Fire Support Combined Arms Tactical Trainer (FSCATT)

FSCATT is a project to provide training of the Army Field Artillery Gunnery Team. FSCATT Request for Proposal (RFP) Package realized substantial reductions in military standards/specifications and data requirements. FSCATT realized substantial reductions in in-house costs, an accelerated schedule, and a \$14.0 million contract cost avoidance with no compromise in quality or performance.

Joint Primary Aircraft Training System (JPATS)

The JPATS program is a joint (Air Force/Navy) project to replace the AF T-37B and Navy T-34C aircraft and related ground based training systems. JPATS was structured to take advantage of NDI/commercial practices. The final RFP contained a reduced number of pages and contract clauses, a substantial reduction in data requirements, and military standards. Program office staffing was also reduced.

Commercial Derivative Engine (CDE)

- The CDE is a project to procure the F-117 engine as the power plant for the C-17 cargo aircraft. The F-117 engine is fulfilling all C-17 mission requirements with substantial savings in manpower and program cost. The use of commercial practices has also reduced acquisition and production lead times, obtained a commercial warranty at no direct charge, permitted contractor configuration control to allow the contractor to implement design improvements, and reduced oversight of the contractor's production process. The long term commitment by the AF for the C-17 will result in a savings of \$175 million over the seven year multiyear contract on the engines.

Commercial Derivative Aircraft (CDA)

The CDA was a program to procure a Non-Developmental Airlift Aircraft (NDAA) to perform some of the functions of the C-17, should the C-17 not have achieved its cost and technical goals. NDAA was terminated in November 1995, because C-17 did meet program requirements, NDAA served as an important competitive leveraging factor in helping achieve an affordable price from McDonnell Douglas for the C-17. The NDAA competition is credited with saving \$1.7 billion on the C-17 program.

Defense Personnel Support Center (DPSC)

DPSC has purchased approximately \$3.1 billion worth of 110,000 different items in FY 1996 using best commercial practices. DPSC purchases commercial products using electronic commerce, ordering based on customer demand, and providing delivery directly to the customer, thus eliminating inventory and lengthy lead times. Instituting these practices has resulted in a significant decrease in the number of contract terminations for default saving time and money in legal costs, reprocurement, and lost payments to defaulted contractors. Under the program, medical and subsistence customers receive products within 48 hours. This compares with 30-60 days from a government warehouse.

C-130J Hercules

The C-130J program will demonstrate the application of commercial practices on a major system acquisition. Key elements include: contractor completion of aircraft testing, including military unique testing, prior to acceptance of first aircraft, contractor configuration management, quality assurance, and production management using commercial practices, and contractor organic and depot maintenance. The C-130J has significantly reduced RFP pages, workload and workforce, program staffing, and government contract administration.

ACQUISITION WORKFORCE

The Department of Defense acquisition workforce is our most important asset to assure long-lasting reform of the acquisition system and optimizing the expenditure of ever-decreasing

acquisition resources. It is through their professionalism, dedication and efforts that the DoD accomplished the significant improvements outlined in the earlier section on Acquisition Reform. I am happy to report that the DoD acquisition workforce is in excellent condition.

In 1986, the Packard Commission described the DoD acquisition workforce as "undertrained, underpaid, and inexperienced." The Commission emphasized the direct relationship between personnel reform and acquisition reform noting: "Whatever other changes may be made, it is vitally important to enhance the quality of the defense acquisition workforce - both by attracting qualified new personnel and by improving the training and motivation of current personnel."

Over the last five years, the Department concentrated considerable effort in improving the development, education, training and utilization of our acquisition professionals. The investment in this key resource provides significant benefits. Current trends solidly indicate a successful transformation to a superior workforce - one of high quality, very motivated and extremely professional. This workforce is equipped to implement numerous new reforms, execute the myriad of acquisition functions and be able to provide the goods and services to our war fighters, now and in the future.

Right-Sizing the Workforce

The Department consistently manages, actively instead of reacting to other influences, the acquisition workforce. The recent report to the Congress, "Right Sizing the Department of Defense Acquisition Workforce", responded to concerns that the workforce might be too large. As the report indicated, the Department's plan results in a 25% smaller acquisition workforce over the five-year period, FY 1996-2000.

Section 906 of the National Defense Authorization Act mandated an FY 1996 reduction of 15,000 personnel (acquisition organization less depot skilled trades). The actual reduction was 23,802 (military/civilian). As we reported earlier, we estimate an additional reduction of 20,000 in FY 1997, allowing the Department to more than adequately accomplish a two-year mandated reduction of 30,000.

If the Department's management efforts were not limited by the depot skilled-trades exemption, the actual realized personnel reduction was 30,377 in FY 1996, in these same organizations. Further, the Department estimates a two year reduction (FY96 - 97) of over 56,000, or 13.2%.

Many view the acquisition workforce from a little different perspective. This view includes all personnel (military & civilian) employed in or assigned to acquisition organizations specified in DoDI 5000.58 (with no exclusions). By FY95, from this perspective, the acquisition workforce was 35% below the 1989 peak level of employment. It was 18% below the 1980 level and continuing to fall, while defense related employment in industry was above 1980 levels. By the end of FY96, these organizations were over 36% smaller than in 1989, and there were approximately 200,000 fewer people. We forecast that by the end of FY2000, these same organizations will effectively be

48% smaller, or down by more than 288,000 people. The Department continues on a deliberate, consistent reduction path of actively managing our personnel in acquisition organizations.

Program Management Stability

Another persistent concern is stability of our program managers (PM) and deputy program managers (DPM) in program offices. The Department's results in this area show considerable improvement in experience of the managers of our major programs and the length of time they remain on the job. In FY 1993, the experience of our ACAT I (Acquisition Category I) program managers when they occupied their positions was 64 months in a program management organization or office and 116 months total acquisition experience. By the end of FY96, this experience reached 128 months in a program management office (101% increase) and 211 months overall (82% increase).

Supporting the management stability of our programs is the fact that our PMs and DPMs now remain longer in their jobs. Tenure improvement for ACAT I PMs and DPMs is as significant as their experience improvements. By FY96, the number of PMs serving at least four years was up to 66% with an average PM tenure of 44 months. This is in contrast to the low of 28% serving full-term in FY 1994, and a low average tenure of only 24.2 months in FY 1992. DPM average tenure was 52 months, with 46% serving at least four years on the job in FY96. These results improved greatly since FY95 when only 30% of reassigned DPMs served full-term and the overall length of DPM assignment was 38.1 months.

Professional Development and Training

As in previous years, training remains an integral element in achieving objectives to professionalize the acquisition workforce and fully implement the benefits of acquisition reform. As in all previous years, the Department provided in FY 1996 an increased availability of training and education opportunities for the acquisition workforce. Our efforts continued with full utilization of a very wide range of opportunities to update and train the workforce on changes in acquisition, new initiatives and implementing policies. These methods include electronic and printed newsletters, outreach programs, Defense Acquisition University (DAU) course changes, seminars, regional conferences, roadshows, and use of multiple delivery mediums and methods. Our first Acquisition Reform Day provided intense and concentrated updates to all of the workforce in numerous specific areas.

During FY 1996 the 12 consortium schools of the DAU provided a diverse series of updated, improved and new training opportunities allowing the Services and Components to satisfy their statutory requirements. In FY 1996 there were 1,209 class offerings to 32,433 students. Class offerings are up from 1,145 in FY 1995 and 1,100 in FY 1994. The number of students trained is slightly down from last year's 32,700, primarily because of the government shutdown which impacted all the schools. However, there is a 7% increase since FY94 when 30,300 students completed courses. Of the 1,209 offerings in FY 1996, 880 or 72% were resident, while 371 were on-site and the remaining 20 were by satellite. The Department is aggressively pursuing regional and other on-site course presentations where there is a sufficient workforce concentration to

- **reduce costs and increase training opportunities.**

SUMMARY

The Department of Defense has undertaken many initiatives in order to implement Acquisition Reform as we have recognized that our environment has and will continue to change. External and internal pressures to be more effective and efficient have lead us to improve and streamline our processes to acquire the systems necessary to support the Department's mission. As we have improved our acquisition processes, we have also changed the environment in which we operate. Our organizations are becoming smaller, electronic-based centers using integrated product teams of multi-skilled professionals focused on balancing tactical business concerns with strategic visions.

Certainly, as we undergo these changes, we must also provide for a high quality, professional workforce. We believe through our continued implementation of DAWIA and the Department's commitment we are achieving this. The DoD has made great strides improving the professionalism of the workforce. We have a world class professional acquisition workforce, highly capable, motivated and able to implement acquisition-reform initiatives, while executing the acquisition system to provide our 21st Century systems to support our world-wide commitments.

Mr. Chairman, the Department of Defense is not finished with acquisition reform. The Department is still implementing the ground-breaking statutory changes provided by Congress, evaluating changes already made and looking at areas where these changes can be improved. There are more cost reductions to be realized, efficiencies to be achieved, and better technology to be acquired and provided to the war fighter. Reform of the defense acquisition system is full speed ahead.